

# **Appendix E**

## **Baseline Storm Water Awareness Survey**

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## Michigan Department of Transportation: Employee Storm Water Awareness Survey

(Revised – February 18, 2005)

This is an anonymous survey intended to help develop a storm water education program for MDOT employees and contractors. Your answers will help to determine what storm water management topics to address in future educational materials and training programs for MDOT employees and contractors that perform job-related activities with the potential to affect the quality of storm water discharges. Your answers are strictly confidential and will not be used for any other purpose. Thank you in advance for your time to complete this survey.

### A. Background Information

1. Organizational Affiliation: ☐ MDOT Employee ☐ Contractor
2. Department/Division (if an MDOT contractor, list the MDOT Division you work with most often):
3. Years of Experience with MDOT: ☐ 0-5 yrs ☐ 6-15 yrs ☐ 16-25 yrs ☐ more than 25 yrs
4. Total Years of Work Experience: ☐ 0-5 yrs ☐ 6-15 yrs ☐ 16-25 yrs ☐ more than 25 yrs
5. Civil Service Classification (if an MDOT Employee):
6. Highest Level of Education (if **not** an MDOT Employee):  
☐ High school/GED ☐ Associate's degree ☐ Bachelor's degree ☐ Graduate degree
7. Geographic Area of Responsibility (select all those that apply):  

<input type="checkbox"/> Statewide	<input type="checkbox"/> Southwest Region	<input type="checkbox"/> Lansing Central Office
<input type="checkbox"/> Grand Region	<input type="checkbox"/> University Region	
<input type="checkbox"/> Bay Region	<input type="checkbox"/> Superior Region	
<input type="checkbox"/> Metro Region	<input type="checkbox"/> North Region	

### B. General Storm Water and Water Quality Questions

1. To what extent do you feel that water pollution is a problem in Michigan?  
Low - ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 - High
2. Have you received any training on MDOT's storm water program? ☐ Yes ☐ No
3. Do you know that MDOT has a Public Storm Water Web Site? ☐ Yes ☐ No
4. If you answered "Yes" to number 3, how often have you visited the MDOT Public Storm Water Web Site in the past six months? (Check the one that best applies)  

<input type="checkbox"/> Never	<input type="checkbox"/> Six to ten times
<input type="checkbox"/> One to five times	<input type="checkbox"/> So many times, I can't count them all.

5. In your opinion, what is the most important thing MDOT should do to help protect water quality?
6. In your opinion, what is the most important thing that you can do as an MDOT employee or contractor to prevent storm water pollution?
7. What is the largest cause of water pollution in Michigan? (Rank top 3 causes of water pollution in order of significance, with 1 being the most significant.)
- |  |                          |
|--|--------------------------|
| Agriculture                                    | Urban storm water runoff |
| Sewage spills from wastewater treatment plants | Industries               |
|  | Contaminated sediments   |
8. Storm water runoff is rain and snowmelt conveyed by a drainage system and discharged to a river or lake untreated. Is this statement true or false? ☐ True ☐ False
9. Which structures and features are part of MDOT's drainage system? (Check all those that apply):
- |                                       |   |
|---------------------------------------|---|
| <input type="checkbox"/> Catch basins | <input type="checkbox"/> Roadside ditches in MDOT's ROW |
| <input type="checkbox"/> Inlets       | <input type="checkbox"/> Culverts                       |
| <input type="checkbox"/> Sidewalks    | <input type="checkbox"/> Don't know                     |
| <input type="checkbox"/> Underdrains  |   |
10. What are common sources of pollutants that may affect storm water runoff in MDOT's drainage system? (Check all those that apply):
- |   |   |
|---|---|
| <input type="checkbox"/> Vehicle washing and maintenance activities | <input type="checkbox"/> Spills                   |
| <input type="checkbox"/> Litter                                     | <input type="checkbox"/> Snow removal and deicing |
| <input type="checkbox"/> Material storage                           | <input type="checkbox"/> Construction activities  |
| <input type="checkbox"/> Material loading                           | <input type="checkbox"/> Don't know               |
11. Which of these found in or near an MDOT storm water outlet to a waterbody (outfall) could be an indication of problems in the drainage system? (Check all those that apply):
- |  |  |
|--|--|
| <input type="checkbox"/> Water draining from outfalls during dry weather | <input type="checkbox"/> Excessive algae         |
| <input type="checkbox"/> Rotten egg odor                                 | <input type="checkbox"/> Litter and other debris |
| <input type="checkbox"/> Staining on outlet pipe                         | <input type="checkbox"/> Soap suds               |
| <input type="checkbox"/> Oily sheen                                      | <input type="checkbox"/> Don't know              |
12. Do you know that it is illegal to dump anything except storm water (i.e. motor oil, paint, dirty wash water, etc.) into a storm drain or gutter? ☐ Yes ☐ No
13. Generally, to what extent are you unsure of the proper disposal method(s) for any waste materials that you've encountered at work? Check one
- Low - ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 - High
14. If you had to clean up dirt and landscaping materials from an outside paved area at work, would you hose down the area into the nearest storm drain? ☐ Yes ☐ No

15. Do you know what a non-emergency storm water pollution problem is? ☐ Yes ☐ No  
 If "Yes", do you know who to report a work-related non-emergency storm water pollution problem to? ☐ Yes ☐ No  
 If you answered "Yes," please list the title of the person you would contact:

16. What type of work training is most effective for you? (Rank top 3 work training types in order of effectiveness, with 1 being the most effective.)

Class-room presentations  
 Field trips  
 On-line tutorials

Field manual  
 Video  
 Other:

17. What type of materials will help you to remember to follow proper storm water practices on the job? (Rank top 3 material types in order of effectiveness, with 1 being the most effective.)

Newsletter articles  
 Web site  
 Poster  
 E-mail

Manual  
 Brochure  
 Video  
 Other:

### C. Specific Job Category Questions

Please answer the questions under **one** job category below that best applies to your job responsibilities. The three job categories are as follows: Design, Construction, and Maintenance.

#### Job Category: Design

1. Have you used MDOT's Drainage Manual? ☐ Yes ☐ No
2. Have you received training on MDOT's Drainage Manual? ☐ Yes ☐ No  
 If you answered "Yes," please rank the effectiveness of the selection(s) that best describes your training.
  - Formal training session      Low - ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5 - High
  - Brief overview with supervisor      Low - ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5 - High
  - Read the Drainage Manual.      Low - ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5 - High
3. In your experience, at what point in the MDOT project delivery process is storm water management initially considered? (Check the one that most applies.)
 

<input type="checkbox"/> Project Scoping	<input type="checkbox"/> Operation and Maintenance
<input type="checkbox"/> Preliminary Engineering	<input type="checkbox"/> Other:
<input type="checkbox"/> Construction	<input type="checkbox"/> Don't know
4. Check the box that best represents a permanent structural best management practice (BMP).
 

<input type="checkbox"/> Sand and stone bags	<input type="checkbox"/> Street Sweeping
<input type="checkbox"/> Employee training	<input type="checkbox"/> Don't know
<input type="checkbox"/> A detention basin	

5. What are the three most significant barriers/challenges to incorporating storm water pollution controls in the design of a project? (Rank top three barriers/challenges in order of significance, with 1 being the most significant barrier.)

Cost considerations

Land availability

Public safety issues

Special needs (e.g., impact to trout habitat)

Aesthetics

Maintenance issues

Other:

Don't Know

6. Do MDOT project designs routinely include storm water pollution controls to address water *quality*, as opposed to water *quantity*? ☐ Yes ☐ No ☐ Don't know

If you answered "No," please explain.

7. Does MDOT design soil erosion and sedimentation controls so that they also function as permanent storm water pollution controls to address water quality? ☐ Yes ☐ No ☐ Don't know

8. What elements should a plan include to keep permanent MDOT storm water pollution controls working as intended over time? (Check all those that apply):

☐ Cost information

☐ Inspection schedules

☐ Maintenance schedules

☐ Responsibilities chart

☐ Equipment needs

☐ Date of installation

☐ Don't know

9. Are plans for permanent MDOT storm water pollution controls routinely prepared as part of the design process? ☐ Yes ☐ No ☐ Don't know

### Job Category: Construction

1. Have you used MDOT's Soil Erosion and Sedimentation Control (SESC) Manual? ☐ Yes ☐ No

2. Have you attended SESC training? ☐ Yes ☐ No

If you answered "Yes," please rank the effectiveness of the selection(s) that best describes your training.

- Formal MDEQ training Low - ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 - High
- Storm Water Operator training Low - ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 - High
- Overview internal to MDOT Low - ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 - High
- Read SESC Manual Low - ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 - High

3. Are you a certified storm water operator? ☐ Yes ☐ No

4. What are the signs that a soil erosion and sediment control is not effective? (Check all those that apply.)

☐ Soil and mud on adjacent roadways

☐ Sagging silt fence

☐ Full sediment traps and basins

☐ Blowing dirt or dust

☐ Sediment flowing off-site

☐ Don't know

5. Have you ever identified a soil erosion and sediment control problem at a construction site?

☐ Yes ☐ No

6. If you answered "Yes" to number 5, did you report the problem? ☐ Yes ☐ No

7. Have you ever identified a problem with materials storage, equipment storage and maintenance, or waste management at a construction site? ☐ Yes ☐ No

8. If you answered “Yes” to number 7, did you report the problem? ☐ Yes ☐ No

9. How often are soil erosion and sediment controls inspected at construction sites? (Check those that apply.)

☐ Daily

☐ Weekly

☐ After major changes on the site

☐ Change of seasons

☐ After every significant rain event

☐ Other:

10. What have you found to be the **most** effective way to reduce sediment pollution from a project site? (Check the one that most applies.)

☐ Complete project before the rainy season

☐ Maintain best management practices

☐ Limit the area disturbed

☐ Install best management practices prior to disturbance

11. What have you found to be the **most** effective way to reduce non-sediment pollution from a project site? (Check the one that most applies.)

☐ Inspect contractor’s equipment and fuel storage area

☐ Discuss the importance of pollution prevention often

☐ Include a special provision telling the Contractor what to do

☐ Remind contractor of potential enforcement actions

12. To what extent would the following types of information be helpful to you in considering storm water pollution prevention on a project site? Circle one number for each item.

- |  |       |                            |                            |                            |                            |                                   |
|--|-------|----------------------------|----------------------------|----------------------------|----------------------------|-----------------------------------|
| • Checklist                            | Low - | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 - High |
| • Brochure                             | Low - | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 - High |
| • Condensed version of the SESC Manual | Low - | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 - High |
| • Poster                               | Low - | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 - High |
| • Pictures of ineffective BMPs         | Low - | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 - High |
| • On-line reporting form               | Low - | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 - High |
| • Other:                               | Low - | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 - High |

### Job Category: Maintenance

1. Are MDOT’s Maintenance Performance Standards your primary source of information for maintenance activity procedural information? ☐ Yes ☐ No

2. If you answered “No” to number 1, please describe the primary way you receive information on maintenance activities.

3. Have you received training on maintenance considerations through MDOT’s Storm Water Management Program internal training program? ☐ Yes ☐ No

4. If you answered “Yes” to number 3, to what extent was this training effective in teaching storm water pollution prevention techniques for maintenance activities?  
Low - ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 - High
5. Are you familiar with the procedures in your maintenance facility’s Pollution Incidence Prevention Plan (PIPP)? ☐ Yes ☐ No
6. Do you know where spill containment equipment is stored at your facility? ☐ Yes ☐ No
7. Where is the best place to wash and service vehicles and equipment? (Check the one that best applies.)  
☐ Outside near unprotected storm drain ☐ Inside near a sanitary sewer drain  
☐ Inside with floor drain to storm sewer system ☐ Outside near a stream
8. Where are vehicles and equipment washed at your facility? (check all those that apply):  
☐ Inside with floor drain to sanitary sewer system ☐ Outside near unprotected storm drain  
☐ Outside near protected storm drains ☐ Inside with floor drain to storm sewer  
☐ In a covered area, but unsure where drain goes ☐ Other:
9. Do you know where the floor drains discharge to in your facility ? ☐ Yes ☐ No
10. On a scale of one to five, how conscientious do you feel the staff at your facility are about minimizing the exposure of potentially polluting materials and equipment to rain?  
☐ 1 (very conscientious) ☐ 4 (rarely conscientious)  
☐ 2 (conscientious) ☐ 5 (never conscientious)  
☐ 3 (somewhat conscientious)
11. What materials, if any, stored outside the facilities where you work do you feel have the most significant potential to contribute pollutants to storm water runoff?
12. How often is your storage yard or maintenance facility swept? (Check the one that best applies.)  
☐ Daily ☐ After loading and unloading  
☐ Weekly ☐ As needed  
☐ Unknown ☐ Other:
13. Does your facility calibrate salt dispensers before deicing? ☐ Yes ☐ No ☐ Don’t know
14. If you conduct pesticide and fertilizer application activities, is your MDOT pesticide applicator certification training current? ☐ Yes ☐ No ☐ I do not conduct these activities.
15. Do you conduct inspection and maintenance of structural storm water pollution controls?  
☐ Yes ☐ No
16. If you answered “Yes” to number 15, do you follow the associated maintenance plan for structural storm water pollution controls prepared during the preliminary engineering phase of the project?  
☐ Yes ☐ No
17. If you answered “No” to number 16, please explain why you do not follow the associated maintenance plan for storm water pollution controls.